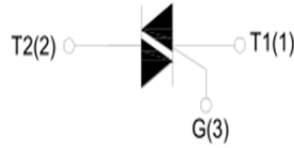


东莞市环昕微实业有限公司

Features

- ▣ IT(RMS): 60A
- ▣ VDRM VRRM:
600V/800V /1000V
1200V/1600V



BTB60. PDF

T0-247S

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value
IT(RMS)	RMS on-state current	60A
VDRM	Repetitive peak off-state voltage	600V/800V/1000V/1200V/1600V
VRRM	Repetitive peak reverse voltage	600V/800V/1000V/1200V/1600V
Tj	Operating junction temperature range	~40°C~125°C
Tstg	Storage junction temperature range	~40°C~150°C
VDSM	Non repetitive surge peak Off-state voltage	VDRM+100V
VRSM	Non repetitive peak reverse voltage	VRRM+100V
ITSM	Non repetitive surge peak on-state current (full cycle, F=50Hz)	600A/610A
I ² t	I ² t value for fusing (tp=10ms)	1500A ² S
dI/dt	Critical rate of rise of on-state current (I _G = 2×I _{GT})	100A/μs
IGM	Peak gate current	8A
PG(AV)	Average gate power dissipation	2W
PGM	Peak gate power	10W

ELECTRICAL CHARACTERISTICS (Tj = 25°C unless otherwise specified)

Symbol	Test Condition	Quadrant	Value
			BTB60
IGT	VD=12V RL=33Ω	I - II - III	<50mA
VGT		ALL	<1.3V
VGD	VD=VDRM Tj=125°C RL=3.3KΩ	ALL	>0.2V
IL	IG=1.2IGT	I - III	<80mA
		II	<120mA
IH	IT=100mA		<60mA
dV/dt	VD=2/3VDRM Gate Open Tj=125°C		>1000V/μs
(dV/dt) _c	Without snubber Tj=125°C		>20V/μs
VTM	ITM=80A tp=380μs (Tj = 25°C)		<1.55V
IDRM	VD=VDRM VR=VR	Tj = 25°C	<50μA
IRRM	RM	Tj = 125°C	<8mA
Rth(j-c)	junction to case (AC)	T0-247S	0.65°C/W

东莞市环昕微实业有限公司

FIG.1 Maximum power dissipation versus RMS on-state current

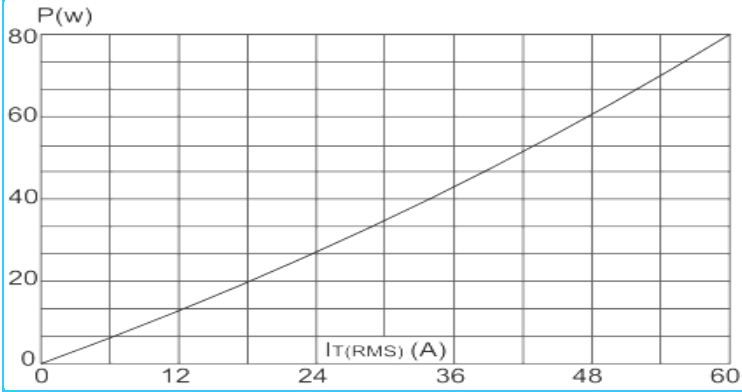


FIG.2: RMS on-state current versus case temperature

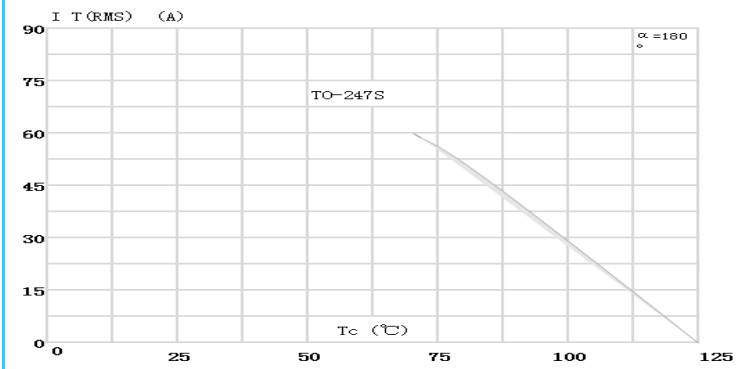


FIG.3: Surge peak on-state current versus number of cycles

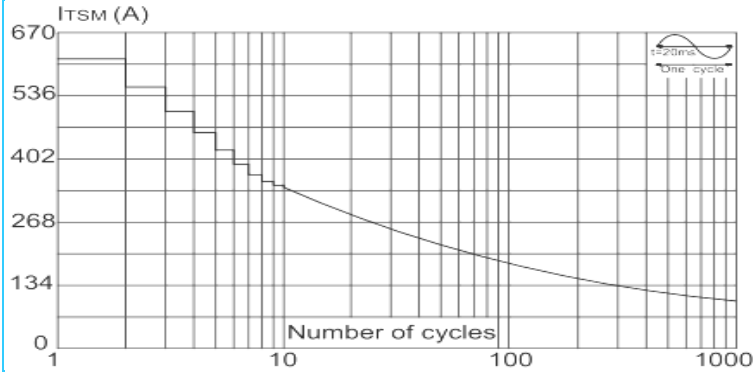


FIG.4: On-state characteristics (maximum values)

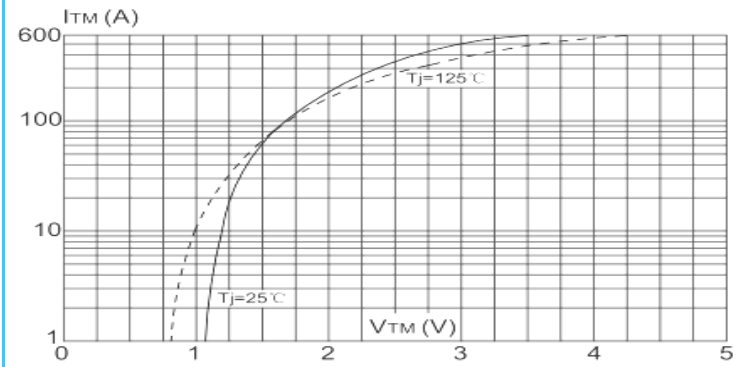


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 20\text{ms}$, and corresponding value of I^2t ($dI/dt < 100\text{A}/\mu\text{s}$)

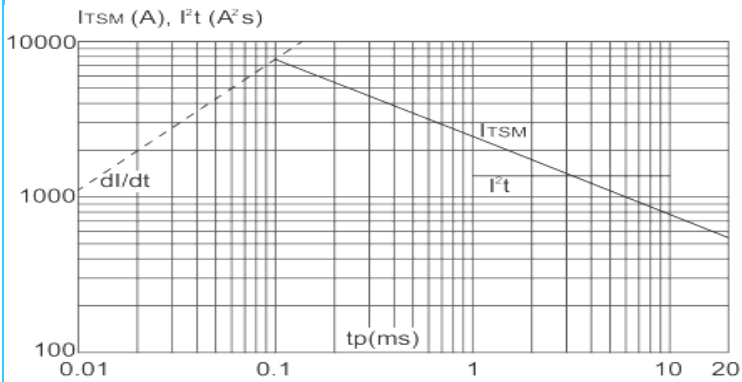
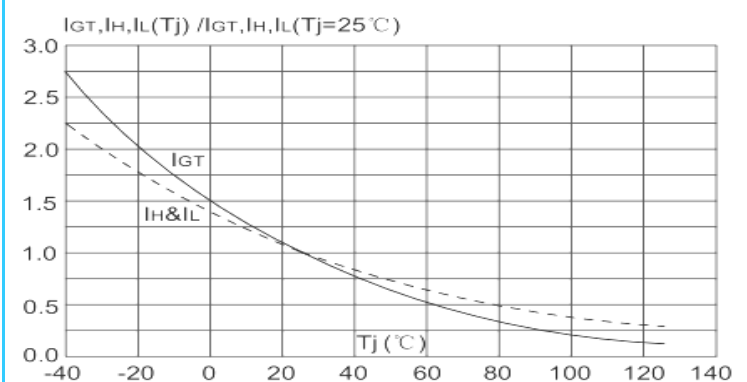


FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction temperature



PACKAGE MECHANICAL DATA

Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	15.1		16.1	0.594		0.634
B	19.8		20.8	0.78		0.819
C	13.8		14.8	0.543		0.583
D	3.00		4.00	0.118		0.157
E	2.75		3.35	0.108		0.132
F	1.30		1.50	0.051		0.059
G	5.10		5.80	0.201		0.228
H	4.50		5.50	0.177		0.217
J	1.45		2.15	0.057		0.085
K	1.90		2.80	0.075		0.110
L	0.55		0.80	0.022		0.031
P	2.00		2.40	0.079		0.094

